

In the Claims:

1 1. (currently amended) A method of fabricating a semiconductor
2 device by employing ion implantation to provide a
3 semiconductor substrate ~~[[1]]~~ at a surface thereof with
4 a region having dopant introduced therein, comprising the
5 steps of: providing said semiconductor substrate ~~[[1]]~~ at
6 a surface thereof with a mask layer including a polyimide
7 resin ~~film (2);~~ film; and implanting dopant ~~ions (5);~~ ions.

1 2. (currently amended) A method of fabricating a semiconductor
2 device by employing ion implantation to provide a
3 semiconductor substrate ~~[[101]]~~ at a surface thereof with
4 a region having dopant introduced therein, comprising the
5 steps of: providing said semiconductor substrate ~~[[101]]~~
6 at a surface thereof with a mask layer ~~[[103]]~~ including
7 a SiO₂ film ~~(107a, 107b)~~ and a thin metal ~~film (105);~~ film;
8 and implanting dopant ~~ions (5);~~ ions.

Claims 3 to 5 (canceled).

1 6. (currently amended) The method of claim 1, wherein said
2 semiconductor substrate ~~[[1]]~~ is heated to at least 300°C
3 and dopant ions ~~[[5]]~~ are implanted.

- 1 7. (currently amended) The method of claim 1, wherein said
2 semiconductor substrate ~~[(1)]~~ is heated to at least 500°C
3 and dopant ions ~~[(5)]~~ are implanted.
- 1 8. (currently amended) The method of claim 1, wherein said
2 polyimide resin film ~~[(2)]~~ is formed of photosensitive
3 polyimide resin.
- 1 9. (currently amended) The method of claim 1, wherein said
2 polyimide resin film ~~[(2a)]~~ has a thickness of at least
3 twice a depth of dopant introduced into said semiconductor
4 substrate ~~[(1)]~~ at a region free of said polyimide resin
5 ~~film (2a).~~ film.
- 1 10. (currently amended) The method of claim 1, wherein a thin
2 metal film is posed between said polyimide resin film
3 ~~[(2a)]~~ and said semiconductor ~~substrate (1).~~ substrate.
- 1 11. (currently amended) The method of claim 1, wherein a thin
2 film formed of SiO₂ is posed between said polyimide resin
3 film ~~[(2a)]~~ and said semiconductor ~~substrate (1).~~
4 substrate.
- 1 12. (currently amended) The method of claim 2, wherein said
2 semiconductor substrate ~~[(101)]~~ is heated to at least
3 300°C to 500°C and dopant ions are implanted.

- 1 **13.** (currently amended) The method of claim 2, wherein said
2 semiconductor substrate ~~[[101]]~~ is heated to at least
3 500°C to 800°C and dopant ions are implanted.
- 1 **14.** (currently amended) The method of claim 2, wherein said
2 mask layer ~~[[103]]~~ is formed of at least three layers.
- 1 **15.** (currently amended) The method of claim 2, wherein said SiO₂
2 film ~~(107a, 107b)~~ and said thin metal film ~~[[105]]~~ each
3 have an average thickness of 500 nm to 1.5 μm.
- 1 **16.** (currently amended) The method of claim 2, wherein said
2 mask layer ~~[[103]]~~ includes a SiO₂ film as a film
3 corresponding to a bottommost layer.
- 1 **17.** (currently amended) The method of claim 2, wherein said
2 mask layer ~~[[103]]~~ includes a thin metal film as a film
3 corresponding to a bottommost layer.
- 1 **18.** (currently amended) The method of claim 2, wherein said
2 mask layer ~~[[103]]~~ includes a SiO₂ film as a film
3 corresponding to a topmost layer.
- 1 **19.** (currently amended) The method of claim 2, wherein said
2 mask layer ~~[[103]]~~ includes a thin metal film as a film
3 corresponding to a topmost layer.

- 1 **20.** (currently amended) The method of claim 2, wherein said SiO₂
2 film ~~(107a, 107b)~~ is formed by SOG.
- 1 **21.** (new) The method of claim 2, wherein said semiconductor
2 substrate is a SiC semiconductor substrate.
- 1 **22.** (new) The method of claim 2, wherein said mask layer is
2 deposited on said semiconductor substrate at a region to be
3 undoped with dopant ions.
- 1 **23.** (new) The method of claim 2, wherein said dopant ions are
2 implanted into a region unmasked by said mask layer.
- 1 **24.** (new) The method of claim 1, wherein said semiconductor
2 substrate is a SiC semiconductor substrate.
- 1 **25.** (new) The method of claim 1, wherein said mask layer is
2 deposited on said semiconductor substrate at a region to be
3 undoped with dopant ions.
- 1 **26.** (new) The method of claim 1, wherein said dopant ions are
2 implanted into a region unmasked by said mask layer.

[AMENDMENT CONTINUES ON NEXT PAGE]